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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/031,288	05/09/2002	Pushpa Khanna	3097-4007	2529

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345 PARK AVENUE
NEW YORK, NY 10154

EXAMINER

LILLING, HERBERT J

ART UNIT	PAPER NUMBER
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1651

DATE MAILED: 07/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/031,288

Applicant(s)

KHANNA, PUSHPA

Examiner

HERBERT J LILLING

Art Unit

1651

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☒ Claim(s) 1-12 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: ATTACHMENTS TO PTO326 2P65

Art Unit: 1651

1. Claims 1-12 are pending in this application, which is a 371 of PCT/IN99/00030, filed 07/15/1999.

2. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1-2, drawn to oil extracted from the seeds of *Momordica charantia* having specific ingredients.

Group II, claim(s) 3-7, drawn to a mixture of oil with other oil components.

Group III, claim(s) 8-11, drawn to a process for the extraction of seeds which does not require the specifics of Inventions I or II

Claim 12 is nonstatutory and cannot be properly classified. If applicant amends the claim to be a statutory claim, then the claim(s) may be restricted from the above groups. Therefore, any amendment to the claim, which places the claim to be statutory based on 35, U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title;

Applicant will be required to elect the new claim for examination or place the amended claims in the appropriate group, which will be considered whether or not the new claim would be within the scope of the elected group.

The record indicates that the above restriction is proper since the various groups lack a single general inventive concept in view of the two documents submitted in the PCT, Armougom et al and Tandon et al which articles anticipates the claimed invention 1. Thus, the restriction as submitted is proper according to PCT and MPEP rules.

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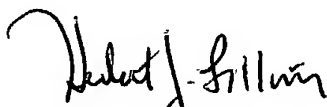
3. Applicant should note that in claim 3, the expression in lines 2-3 is vague and indefinite "oil extracted from the of Momordica charantia L." In addition, the percentage by weight is non-enabling as submitted. Both of these would require correction if Applicant elects this group.

4. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

5. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

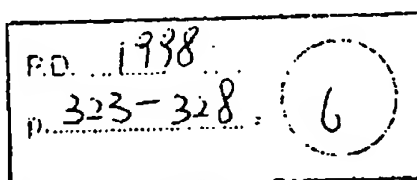
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Examiner Lilling whose telephone number is 571-272-0918 and Fax Number is (703) 872-9306** or SPE Michael Wityshyn whose telephone number is 571-272-0926. Examiner can be reached Monday-Thursday from about 5:30 A.M. to about 3:00 P.M. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0196.

H.J.Lilling: HJL
(703) 308-2034
Art Unit 1651
July 21, 2004


Dr. Herbert J. Lilling
Primary Examiner
Group 1600 Art Unit 1651

Composition en acides gras des extraits lipidiques de quelques graines de cucurbitacées tropicales

XP-000891603



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Résumé : La composition en acides gras de six huiles de graines de cucurbitacées cultivées à La Réunion (océan Indien) a été comparée. Les rendements en huile par rapport au poids de graines sèches ont été les suivants : *Lagenaria leucaritha*, communément appelée calebasse, variétés bouteille (22,3 %), « la gale » (16,4 %) et longue (21,9 %) ; *Luffa acutangula* ou pipongaille à côtes (24,7 %) et *Luffa cylindrica* ou pipongaille lisse (27,4 %) ; *Momordica charantia* ou margoze (32,6 %).

Les huiles du genre *Luffa* sont du type palmitique (C16 : 0), oléique (C18 : 1), linoléique (C18 : 2). Les huiles du genre *Lagenaria* variétés bouteille et « la gale » sont riches en acides palmitique (C16 : 0) et linoléique (C18 : 2) ; la variété longue est plutôt du type oléique (C18 : 1) - linoléique (C18 : 2). L'extrait lipidique du genre *Momordica* se distingue des cinq autres huiles par ses fortes teneurs en acide stéarique (C18 : 0) et en acides conjugués en C18 : 3 dont le plus important est l'acide α -éléostéarique (C18 : 3 (9Z,11E,13E)).

Mots clés : cucurbitacées, huile de graines, acide gras, *Lagenaria*, *Luffa*, *Momordica*, acide α -éléostéarique.

Abstract : Fatty acid composition of six cucurbitaceae seed oils grown in Reunion Island (Indian Ocean) is made. The oil yields are as following : *Lagenaria leucaritha*, commonly named gourd with three varieties : bottle (22,3 %), scrabby (16,4 %) and long (21,9 %) ; *Luffa acutangula* or angled *Luffa* (24,7 %) and *Luffa cylindrica* or smooth *Luffa* (27,4 %) ; *Momordica charantia* or margoze (32,6 %). Seed oils obtained from *Luffa* genus are widely abundant in palmitic (C16 : 0), oleic (C18 : 1) and linoleic (C18 : 2) acids. *Lagenaria* genus seed oils providing from bottle and scrabby varieties are both together rich in palmitic (C16 : 0) and linoleic (C18 : 2) acids, long variety is rather an oleic (C18 : 1) and linoleic (C18 : 2) typical one. Lipids extracted from *Momordica charantia* are characterized by high contents of stearic acid (C18 : 0) and conjugated acids in C18 : 3 which the most important is the α -eleostearic acid [C18 : 3 (9Z,11E,13E)].

Key-words : cucurbitaceae, seed oil, fatty acid, *Lagenaria*, *Luffa*, *Momordica*, α -eleostearic acid.

Introduction

Six cucurbitacées cultivées à La Réunion appartenant à trois genres différents : *Lagenaria*, *Luffa* et *Momordica* ont été étudiées. Une relance de la culture de ces légumes a été entreprise par quelques agriculteurs dynamiques, avec l'assistance technique du Service d'utilité agricole et développement de la Chambre d'Agriculture. Parallèlement à la mise sur le marché de ces légumes, il était judicieux de connaître la composition en lipides des graines de ces légumes afin d'en déterminer le potentiel.

La calebasse, *Lagenaria leucaritha*, est cultivée dans l'île sous la forme de trois variétés. Le nom vernaculaire de chaque variété se réfère à la morphologie du fruit. La variété la plus connue est la calebasse bouteille (figure 1). Cultivée depuis très longtemps en Chine et au Japon, sa culture s'est répandue dans plusieurs pays. Cette grande plante herbacée, monoïque et annuelle atteint

FONDAMENTAL

XP-000901224

2.2 1976
P. 1161-1162 (2)

NOTES

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7. S. H. ZAHEDI and G. S. SIDHU, C. N. S. Drugs, A Symposium at the Regional Research Laboratory, Hyderabad, O.S.I.R., 1966 (Jen. 24-30), p. 170.
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9. D. J. RABIER and M. M. JOULLIE, *J. Chem. Soc.*, 1964, 1915.
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Study of *Cucumis melo momordica* Seed Oil

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Manuscript received 4 March 1976; revised 9 August 1976;
accepted 29 October 1976

CUCUMIS melo momordica known as "Phut" (Ripe) or "Kaohari" (unripe) in Hindi belongs to the family *Cucurbitaceae*.^{1,2} The seeds are cooling. The present work deals with the chemical investigation of the seed oil of phut which has not been reported so far. For proper and economic utilization of this oil information on general characteristics and fatty acid composition is of utmost importance. The main objective of the work was to correlate the fatty acid composition with its medicinal application.

Experimental

Authentic samples of the seeds used in the present investigation were collected from the district of Banda. 750 g dried seeds were broken by suitable methods and the shells were separated from the kernel. The kernels were powdered and moisture content was determined. The oil content was determined in a continuous soxhlet extractor using petroleum ether (60°-80°) as solvent. This was purified by filtering through animal charcoal and drying over anhydrous sodium sulphate. The characteristics of the oil were determined by conventional methods. The results are presented in Table 1. 100 g oil were mixed with excess of alcoholic KOH and boiled for 8 hr over a water bath. The alcohol was distilled off and the soap was dissolved in excess of water. The unsaponifiable matter separated by filtration. Then the soap solution was extracted with ether. This removed any remaining unsaponifiable matter. The soap solution was treated with dil. sulphuric acid and the mixture was heated for a few minutes. The liberated fatty acids were taken in a separating funnel after dissolving the fatty acids in ethyl ether. The ethereal solution of fatty acids was washed several times with water

TABLE 1—CHARACTERISTICS OF OIL SEEDS AND OIL.

Moisture %	8.3
Oil %	35.6
Colour of Oil	Light yellow
Refractive index 30°	1.4600
Specific gravity 32°	0.9154
Acid value	9.4
Saponification value	211.3
Iodine value	80.4
Saponification equivalent	265.5
Consistency U.M.	Liquid 0.62%

to free it from impurities. Ether was distilled off and a mixture of fatty acids obtained. The mixed fatty acids were separated into solid and liquid acids by Twitchell's lead salt method modified by Hilditch.^{3,4}

The saponification and iodine values of the mixed fatty acids (solid and liquid) were determined separately and presented in a tabular form (Table 2).

TABLE 2—CHARACTERISTICS OF SOLID AND LIQUID FATTY ACIDS

	Solid fatty acids	Liquid fatty acids
%	23.2%	76.7%
Iodine value	26.2	96.1
Saponification value	235.0	208.0
Saponification equivalent	238.2	269.7

TABLE 3—FRACTIONAL DISTILLATION OF SOLID FATTY ACID METHYL ESTERS

Total weight of esters = 14.7 g.

Fraction	Distillation temp. in °C	Weight of acids in gm.	S.V. of acids	S.E. of acids	I.V. of acids
1.	150-165	3.0	269.3	205.3	19.80
2.	165-180	2.8	216.4	259.2	20.95
3.	180-195	4.1	205.3	273.3	28.53
4.	195 & above	2.9	205.1	273.3	31.03

Pressure = 10 mm.

TABLE 4—FRACTIONAL DISTILLATION OF LIQUID FATTY ACID METHYL ESTERS

Total weight of esters = 48.0 g.

Fraction	Distillation temp. in °C	Weight of acids in gm.	S.V. of acids	S.E. of acids	I.V. of acids
1.	150-160	3.1	197.2	284.4	67.6
2.	160-170	7.6	203.9	275.1	84.2
3.	170-180	18.2	199.1	281.7	121.1
4.	180 & above	10.8	194.9	282.7	119.2

Pressure = 10 mm.